<u>WHAT IS CLAIMED IS</u>:

1   1.   A method for transmitting data across a network comprising:

2   receiving packets of data;

3   combining the packets of data based on packet header destination information to

4 form a first combined file;

5   compressing the first combined file to form a first compressed file; and

6   transmitting the first compressed file.

1   2.   The method for transmitting data across a network according to claim 1,

2 further comprising repacketizing the first compressed file, wherein the transmitting step

3 transmits the repacketized first compressed file.

1   3.   The method for transmitting data across a network according to claim 1, wherein

2 the packets combined to form the first combined file have headers addressed to the same

3 first subnetwork, the first subnetwork comprising a plurality of users.

1   4.   The method for transmitting data across a network according to claim 3, further

2 comprising inserting headers addressed to the first subnetwork on the packets of the

3 repacketized first compressed file.

1   5.   The method for transmitting data across a network according to claim 3, further

2 comprising:

3   selecting a second group of packets of data with headers addressed to a second

4 subnetwork;

5   combining the second group of packets of data to form a second combined file;

6   compressing the second combined file to form a second compressed file; and

7   transmitting the second compressed file.

1 6. The method for transmitting data across a network according to claim 5, further

2 comprising repacketizing the second compressed file, wherein the transmitting step

3 transmits the repacketized second compressed file.

1 7. The method for transmitting data across a network according to claim 6, further

2 comprising inserting headers addressed to the second subnetwork on the packets of the

3 repacketized second compressed file.

1 8. The method for transmitting data across a network according to claim 5, wherein

2 the compressing steps compress the first combined file according to a first compression

3 algorithm and compress the second combined file according to a second compression

4 algorithm.

1 9. The method for transmitting data across a network according to claim 1, wherein

2 the receiving step receives the packets of data from a third subnetwork.

1 10. The method for transmitting data across a network according to claim 1, further

2 comprising ignoring packets destined for at least one of the third subnetwork and a fourth

3 subnetwork based on header destination information.

1 11. A method for transmitting data across a network comprising:

2 receiving packets of data;

3 combining and compressing the packets of data destined for a first subnetwork

4 according to a first compression algorithm to create a first compressed file; and

5 combining and compressing the packets of data destined for a second subnetwork

6 according to a second compression algorithm to create a second compressed file.

1 12. The method for transmitting data across a network according to claim 11, wherein

2 the combining and compressing the packets of data destined for a first subnetwork

3 step further comprises compressing the packets of data destined for the first

4 subnetwork according to a first compression algorithm based upon first header

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5   destination information and the combining and compressing the packets of data

6   destined for a second subnetwork step further comprises compressing the packets

7   of data destined for the second subnetwork according to a second compression

8   algorithm based upon second header destination information.

1   13.   The method for transmitting data across a network according to claim 11, further

2 comprising:

3   repacketizing the first compressed file;

4   repacketizing the second compressed file; and

5   transmitting the packets of the repacketized first compressed file and the packets

6 of the repacketized second compressed file.

1   14.   The method for transmitting data across a network according to claim 11, further

2 comprising ignoring packets destined for a third subnetwork based on third header

3 destination information.

1   15.   An apparatus for transmitting data across a network comprising:

2   an input that receives packets of data;

3   a controller that combines packets of data based on packet header destination

4 information to form a first combined file;

5   a first compressor that compresses the first combined file to form a first

6 compressed file; and

7   an output that outputs the first compressed file to the network.

1   16.   The apparatus for transmitting data according to claim 15, wherein the controller

2 repacketizes the first compressed file and the interface outputs the repacketized

3 compressed file to the network.

1   17.   The apparatus for transmitting data across a network according to claim 15,

2   wherein the packets combined to form the first combined file have headers addressed to

3   the same first subnetwork, the first subnetwork comprising a plurality of users.

1   18.   The apparatus for transmitting data across a network according to claim 17,

2   wherein the controller inserts headers addressed to the first subnetwork on the packets of

3   the repacketized first compressed file.

1   19.   The apparatus for transmitting data across a network according to claim 17,

2   further comprising a second compressor, wherein the controller selects a second group of

3   packets of data with headers addressed to a second subnetwork and combines the second

4   group of packets of data to form a second combined file, the second compressor

5   compresses the second combined file to form a second compressed file, and the output

6   transmits the second compressed file.

1   20.   The apparatus for transmitting data across a network according to claim 19,

2   wherein the controller repacketizes the second compressed file and the output transmits

3   the repacketized second compressed file.

1   21.   The apparatus for transmitting data across a network according to claim 20,

2   wherein the controller inserts headers addressed to the second subnetwork on the packets

3   of the repacketized second compressed file.

1   22.   The apparatus for transmitting data across a network according to claim 19,

2   wherein the first compressor compresses the first combined file according to a first

3   compression algorithm and the second compressor compresses the second combined file

4   according to a second compression algorithm.

1   23.   The apparatus for transmitting data across a network according to claim 15,

2   wherein the input receives the packets of data from a third subnetwork.

1   24.   The apparatus for transmitting data across a network according to claim 15,

2   wherein the controller ignores packets destined for at least one of the third subnetwork

3   and a fourth subnetwork based on header destination information.

1   25.   An apparatus for transmitting data across a network comprising:

2   an input that receives packets of data; and

3   a controller that combines and compresses the packets of data destined for a first

4   subnetwork according to a first compression algorithm to create a first compressed file,

5   and combines and compresses the packets of data destined for a second subnetwork

6   according to a second compression algorithm to create a second compressed file.

1   26.   The apparatus for transmitting data across a network according to claim 25,

2   wherein the controller further compresses the packets of data destined for the first

3   subnetwork according to a first compression algorithm based upon first header

4   destination information and compresses the packets of data destined for the second

5   subnetwork according to a second compression algorithm based upon second header

6   destination information.

1   27.   The apparatus for transmitting data across a network according to claim 25,

2   wherein the controller repacketizes the first compressed file, repacketizes the second

3   compressed file and transmits the packets of the repacketized first compressed file and the

4   packets of the repacketized second compressed file.

1   28.   The apparatus for transmitting data across a network according to claim 25,

2   wherein the controller ignores packets destined for a third subnetwork based on third

3   header destination information.